

Pugwash Note on Nuclear Arms Control and Disarmament

30 January 2021

In early 2021 there is every reason to say that the global arms control and disarmament process, despite earlier achievements, has reached a critical point. The complete or de facto demise of key arms control treaties (such as the ABM Treaty, the CFE Treaty, and the INF Treaty) has left a vacuum in the arms control architecture, thus triggering new challenges for crises and global stability. The Open Skies Treaty is facing an existential threat. The Chemical Weapons Convention is also in a difficult situation, particularly in relation to the Syrian problem and the alleged poisoning of certain Russian personalities. The CTBT, concluded 25 years ago, is shamefully not yet in force. The only existing arms control treaty between the US and Russia is now New START, which was due to expire on 5 February 2021 since its renewal had proved to be impossible under the Trump Administration. But now it is well-known that the prospects for this treaty are much better (see below).

The Treaty on the Non-Proliferation of Nuclear Weapons is also under serious threat. And this is not only just because of the poor situation with respect to the implementation of Article VI which requires “each of the parties to pursue negotiations in good faith on measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control”. There are also some unresolved crisis situations: a very important one is around the Iranian nuclear deal (JCPOA), and more generally about the issue of the creation of a zone free of weapons of mass destruction in the Middle East (see [On the Iran Nuclear Agreement and Middle East Security](#), December 2020). Moreover, there is the very critical situation on the Korean Peninsula and the problem of creating a Nuclear-Weapon-Free Zone in Northeast Asia (see [Note on Northeast Asia Nuclear-Weapon-Free Zone](#), January 2021).

On the other hand, imminent extension of the New START Treaty will be a very positive signal, including for the NPT Review Conference. Pugwash also welcomes very much the entry into force of the Treaty on the Prohibition of Nuclear Weapons on 22 January 2021 (see [Pugwash Note on the Entry into Force of the Treaty on the Prohibition of Nuclear Weapons](#), 21 January 2021). But it is also clear that, for some time to come, it will have to exist without any of the states which possess nuclear weapons (or even those that host American nuclear weapons), and more generally probably

without any state allied to a nuclear-weapon state. This situation could generate another line of tension within the NPT. As a result, the NPT Review Conference, now rescheduled for August 2021, will be very relevant and care should be exercised in order to avoid concerning results.

At the same time, new developments in the field of nuclear and non-nuclear weapon systems—such as missile defense, hypersonic missiles, cyber and space war-fighting capabilities, along with the introduction of various aspects of artificial intelligence into military activities—are beginning to affect strategic stability and can significantly increase the risk of the use of nuclear weapons in the near future. If not understood and constrained, future war-fighting instruments could possibly lead to unrestrained technological and costly arms competition in many fields, and further erode trust and fuel suspicions among states.

These preoccupying trends are developing in conjunction with major tectonic changes in the global distribution of economic, political and military power, diminishing respect for the rule of law and political commitments, and increasing the influence of a zero-sum mentality on political processes and decisions in the area of international security, at the expense of a consensus-based approach and the search for compromises, which inevitably relegates arms control and disarmament further down the scale of political priorities and promotes a toxic militarization (or, if one might say, weaponization) of international affairs. The pandemic, as we discussed extensively in our May 2020 document, has greatly contributed to making difficult things much worse (see [*Pugwash Document on the NPT Review Conference Postponement and Risks after the Pandemic*](#), 6 May 2020).

There is an urgent need to reverse negative trends and revitalize the arms control and disarmament process. Some people speak about going back to the drawing board, “reinventing” arms control and making it more effective and sustainable. They may well have a point, especially in view of the major political, military and technological changes in the world over the last two or three decades. On the other hand, the situation today does not allow us to sit and wait until new concepts are invented and tested. We need to take, without delay, at least some limited steps as soon as possible to prevent a serious relapse of the nuclear arms race.

Let us briefly summarize some of the tasks ahead, starting with two of the most urgent aforementioned issues:

1. The immediate finalisation by the US and Russia of their current efforts to save the bilateral treaty on strategic armaments, commonly known as New START, which should be extended

for 5 years and without preconditions. The two Chambers of the Russian Parliament have now voted in favour of the 5-year extension of the New START, with the support of President Putin. On the other side, President Biden is supporting the five-year extension of the Treaty. At the same time, the US and Russia should hopefully discuss the next steps of the bilateral arms control agenda, aimed at promoting further disarmament, risk reduction, strategic stability and the strengthening of the NPT.

2. The simultaneous return of the US into the JCPOA, and the ensured compliance of both the US and Iran with their respective obligations under this deal.

Other very important issues concern the creation of a WMD-Free-Zone in the Middle East and the creation of a Nuclear-Weapon-Free Zone in Northeast Asia. Looking at the issues of stability and security worldwide, one should also mention the dangerous nuclear confrontation in South Asia. The international community and the major powers should deal in a constructive way to ease the tensions in that region.

The US and Russian arms control process, as we said, is certainly critical to worldwide stability and security. Given the fact that the large majority of nuclear weapons belong to the US and Russia, the most relevant nuclear reductions would have to be, for the time being, bilateral. Let us stress once again that the extension of New START should be followed by a further strong bilateral reduction of nuclear weapons and nuclear delivery systems. Let us point out that this does not exclude other nuclear-weapon states from being involved in the talks about strategic stability, nuclear doctrines, threat perceptions, and measures of mutual restraint and confidence building. In particular, and keeping specifically in mind the next NPT Review Conference, the nuclear-weapon states that are parties to the NPT may wish to explore ways of cooperative adaptation of their nuclear postures towards a Non-First-Use principle. China has already accepted that principle, and the UK, it seems, would not have substantial difficulties with it. The US, Russia and France are another matter, but several earlier statements by President Biden in favour of non-first-use, and President Putin's remarks on 10 November 2020 about the centrality of a retaliatory role for Russia's nuclear arsenal, give reason for hope.

Let us get more specific about the forthcoming agenda.

1. The next phase of bilateral US-Russian nuclear disarmament talks should be preceded by thorough joint explorations of risks and mutual concerns; in this context it would help if both

sides could look beyond just delivery vehicles and nuclear strategic deterrence. For example, new technologies (such as lethal autonomous weapons, hypersonic missiles, etc.) that may be a matter for concern should also be discussed irrespective of the warheads that they may carry. In any case, the US and Russia should look into nuclear warheads themselves and explore the possibility of an actual reduction by certain numbers and categories. The idea of a freeze on nuclear weapons—which both sides were in principle ready to discuss in late 2020 (but which was proposed in the wrong context)—should also be addressed in this wider framework. Special attention should also be paid to reducing nuclear threats and addressing other security risks (in particular in Europe in the aftermath of the elimination of the INF Treaty, but in other parts of the world as well).

2. Recent experience has shown a growing interrelationship between nuclear and non-nuclear military capabilities, with the latter being increasingly able to perform tasks earlier assigned exclusively to nuclear weapons. It is therefore an increasingly urgent task to begin to seriously address the military implications of new technologies such as hypersonic missiles and cyber and space weapons, to name just a few. There is a need to design proper channels (fora) or adapt existing ones (for example, the now blocked Conference on Disarmament in Geneva) wherein militarily advanced states could discuss these new technologies and possible limitations on their development and deployment, including, where appropriate, quantitative limits, areas of non-deployment, and limits on ranges and payloads. The risk of cyberattacks on nuclear command and control and nuclear facilities must be strongly addressed. Here, confidence-building and risk-reduction measures to prevent regional conflicts and unintended incidents, as well as solid risk analysis for new emerging fields such as artificial intelligence and quantum computing, would help to better understand the new emerging threats.
3. While focusing on nuclear arms control, a fresh approach to Conventional Arms Control, to limit arms competition, is also needed. In particular, it is necessary to establish consultations between Russia, the USA, and NATO countries to develop common rules for restraint, transparency, and confidence-building measures to reduce the risk of unintended incidents on land, air, cyberspace and sea. Topics such as conventionally equipped long-range strike systems and ballistic missile defense, as well as limitations on military exercises, notification of naval forces, and new transparency-building and verification measures for conventional

forces, should be important elements for future regulations. The OSCE can be a useful platform to discuss and to implement new regulations.

4. Advances in military technologies, cybersecurity and the risks of cyberattacks on nuclear command and control facilities, space weapons, and certain aspects of nuclear strategy, could also possibly be discussed with other states that possess nuclear weapons, including in particular China.

All these steps—such as new agreements, formal treaties, or rules of the road and confidence-building measures—would take time, but need to be discussed between states. Pugwash is prepared to contribute to these processes with its expertise and members.

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